

does something, it's cursed by its slow process, its deliberations, its capital restraints. And it might be able to do a good thing, but will it move quickly? Will it adapt dynamically to change? And what I worry about is you'll have these great government systems but in a year from now or two years from now, they can't put their budgets and their realities – they can't move quick enough for their consumers.

My beliefs in free market are much less ideological than some will say they are, and more out of futility. Just the sheer futility. When I look at the FCC and I look at 50 states, 51 jurisdictions, and I think about me micromanaging all the pieces of an innovation that in a year it travels with what's innovation in steel manufacturing would take 25 years. I just say how on earth can we possibly be relevant or keep up if we think we're going to micromanage the pieces. But the brilliance of Adam Smith's observation and the brilliance of the market is that it is the most adaptable system humankind has ever come up with. It changes quicker than any central plan. The price is wrong, producers adjust, consumers adjust, innovation adjusts, way faster than any Soviet planned economy, Chinese planned economy, and the U.S. planned economy has ever achieved. I think you're talking high tech and fast moving stuff, you have to be talking about markets because until the next economic genius comes along and invents some state central system that can move that quickly, this is the best we've got, and it works pretty well.

- Q. Federalism, as you've pointed out, can be messy, and federalism may be one of the great challenges to allowing your dream of reducing regulatory barriers to innovation in the sense that when we look at the money in the marketplace today, although data overwhelms the traffic on any network, voice still produces the largest pot of money out there in the marketplace. For Bell Operating Companies, it's on the order that 60-65% of their revenue comes out of local phone service or for providing any access to long distance services terminating in their areas. And you understand better than anyone in this room that our pricing for local telephone services is not a market price, it's a regulated price that we flag with a million side deals politically out of a complicated federal system. People who have telephone service in Harlem subsidize people with their ski condos in Aspen, Colorado. It's an amazing system that we've invented.

So the next big thing over the internet is voice over the internet. It's the largest pot of money that's going to be made available over the internet, in some ways, as a new commercial revenue. And it threatens to undermine the traditional system of cross-subsidies and pricing that fuels the local phone companies because we have treated the internet differently than we've treated the conventional telephone service. You and your predecessors have all said the internet shouldn't be bound by the traditional system of regulation. So as the great convergence now starts to happen, and there's money on the table, and market is starting to really move, what does the FCC do . . . ?

- A. The first thing you have to do is – Your job isn't about protecting subsidies and pots of money for their own sake. It's about going back to first principles – what's the purpose of these programs? The purpose of the universal service program, which you're describing and which all this revenue is collected and centralized in a fund and distributed for subsidization, is to give consumers ubiquity and affordability of service. That's the goal. If that goal is achieved, you don't need any money. You don't need a government program just because it's cool to have one. You need it for a particular purpose. I was intrigued because I've watched a company like Vonage offering people for \$39 unlimited calling, no distance sensitivity, with a whole lot of new innovations. That is a better price and value proposition than the universal service program has ever produced in a hundred years.

I have a big local Regional Bell Operating Company at home, service provider, and I pay \$40 a month, and that's with my subsidized rate and all the taxes and all the enormous infrastructure built up to make that affordable to me. And honestly, every new technological innovation is creating more affordable alternatives for me without any of that help. My wireless phone is a higher value proposition than my wireline phone. It's all you can have – it's local, long distance, buckets of minutes, it's innovative, it's mobility, it's personalization – and it's very little of that fund going to that.

So you have to ask yourself – one of the things is you have to rethink the social goals. It's still ubiquity and affordability, and that should be our dying credo. Every American should get access to these services. Every American shouldn't be left out in the digital revolution. But you ought to look for whether there is new and innovative ways to make sure they're not. And instead of assuming blindly the only way to achieve those things is to bring this thing that basically the CEO of AT&T in 1917 cooked up as an excuse for monopoly, forward indefinitely. It will be with us for a long time and we will work our way through the pots of money that have to be protected and make sure the goals. It's transitional, but if every American tomorrow had Voice-over-IP for \$30, what's the fund for? Aren't you delivering what you want without the distortion of a government micromanaging a big pot of money?

So that's not to say we won't need it or we might still want it, but I challenge people to stop talking about “well look what it will do to the fund.” Forget the fund. What are the goals, and let's achieve the goals. And then you've got to tell me what we're doing wrong if the goals are achieved but the money's under pressure because that doesn't bother me. I'm sure you would love to watch that line item on your bill go away. In Virginia, I don't know what it is in California, I have a \$40 bill and \$18 of that is state taxes, E911 charges, local number portability charges – that's what all that is. So there is a cost to consumers of the fund. You're paying for it. It's not a government appropriation. So if you had

Voice-over-IP and there were none of those charges, you'd have a pretty darn good deal.

The last thing I would say is, it's inevitable. One of the things I like to learn is – I forgot there's a great parable: you know, Titan taking someone to the beach, and at the appointed hour he says "and I will now make the ocean rise," and the tide comes in, you know. You can look like a great magician if you bet on stuff that's inevitable anyway. Well, you know, the regulatory titan is going to look at voice over the internet and say "it shall change the world" because there's no stopping it. Stop thinking of voice as the telephone. It's just an application on an IP network. It's no different than video or data or anything else. When I knew it was over was when I downloaded Skype. Any of you people know what I'm talking about? You know, when the inventors of Kazaa are distributing for free a little program that you can talk to anybody else and the quality's fantastic, and it's free, it's over; you can pretend it's not, you can fight these fights, but it is over. The world will change now inevitably.

\* \* \*

Question from audience: It sounds like your personal opinion is to leave Voice-over-IP free, if you will, and that may in fact become an FCC opinion. I'm wondering what power you have over the states and NARUC and some of the other bodies threatening to regulate Voice-over-IP?

- A. Well, let me take a chance to be kind of clear about what my view is because I think there's a lot that I haven't decided, and I think we have a lot of learning to do before we start making decisions. My view is this: you can come at the problem from two directions – turn the internet into a telephone and argue down – that is you're immediately subject to all the regulations we've written for a hundred years, and we can argue about deregulating down to a place where broadband lives. Or, you can start on a blank slate and regulate up to the extent that it's necessary. I am huge believer that the latter is the only reasonable thing to do because it is not a telephone. It is a new network, it is new technology, it is new applications, it is new consumers. I don't want to treat it like the 100-year-old common carrier model right off the bat.

That doesn't mean I won't be convinced that there are important public policy concerns that have to be regulated on top of it. The burden should be on government to prove that need, not on entrepreneurs to prove that it's not. If I told you tomorrow that the internet is a telephone, all your rates just got tarified, not only at the federal level but in every state jurisdiction in the United States. You just brought yourself a mandatory 10% universal service tax. In a lot of states you'd better buy some new pretty blue badges because every employee is required to wear certain badges on the premises. You'd better have a certain amount of restroom availability which every BOC is required – You don't believe the parade of horrors that flow from that one definition. And so my attitude is, good God, we'll spend the next thirty years trying to get rid of that stuff.

Now if 911 is a critical service to Voice-over-IP fine, let's isolate that problem and solve 911 on Voice-over-IP. If law enforcement has concerns about technology moving, fine, let's solve that problem, that's another thing maybe we'll do, universal service, but I think that list is small. We're talking about 4 or 5 current critical items that probably have to be addressed versus, you know, hundreds of pages that you try to forbear from for the next eternity. So that's really my view. Now, what those things are and how you get there is complicated. With respect to the states, it's just a federal system. There's a rule for the states, but I think that the key here is, where does economic regulation rest, if anywhere? Not consumer protection stuff, not with economic regulation, and I'm personally strongly of the view it's an interstate service.

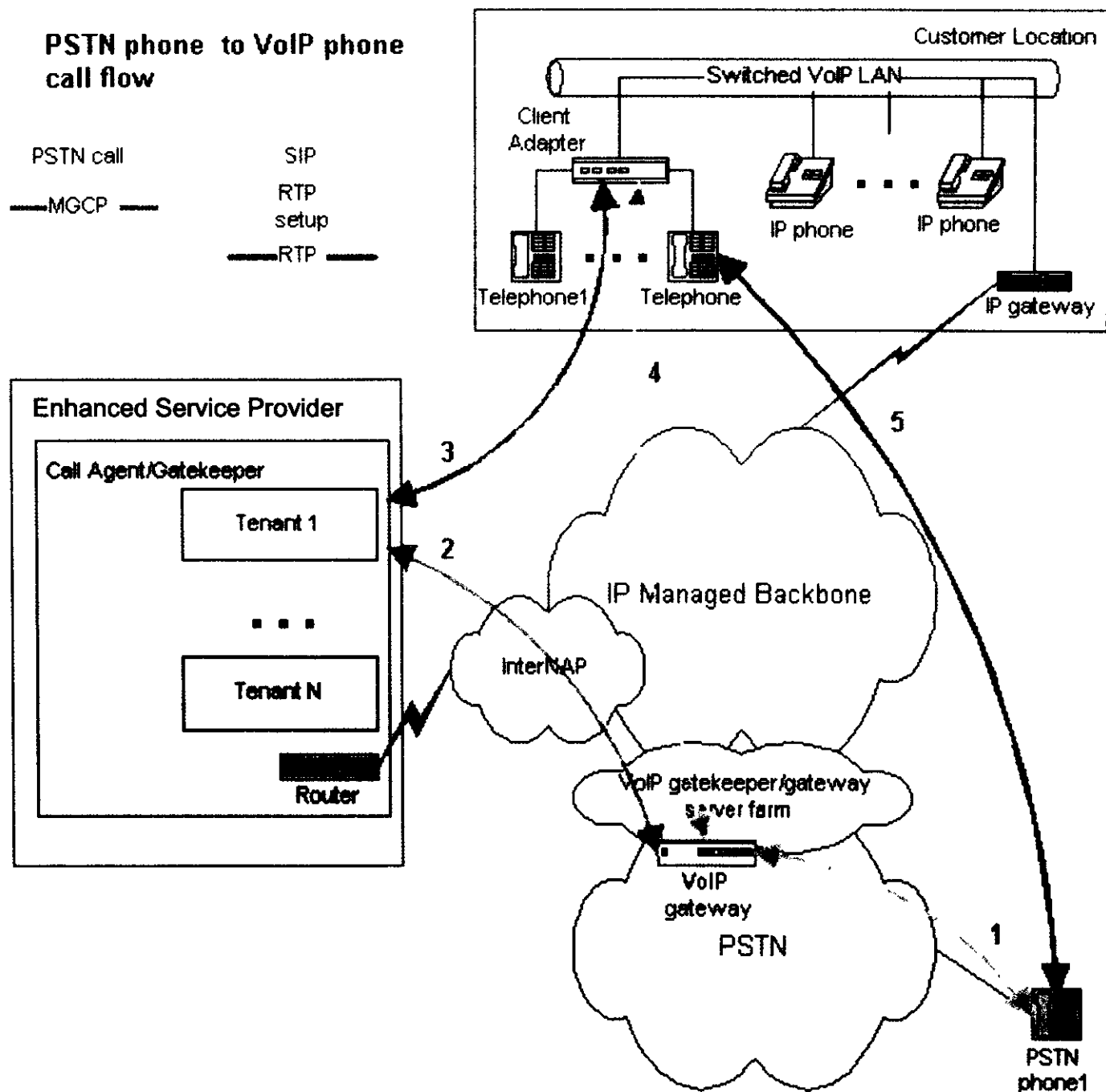
I don't know whether it's internet or telephone, but I know it's not local and I believe very strongly that the internet – it's more like wireless, which is a federal interstate service, or long distance, which is a federal interstate service, than it is like local phone service and I think so. I do believe the FCC is the principal regulatory authority no matter what kind of services, no matter what kind it is, it's interstate in nature, which in essence means that no one state is in a position to regulate it in its entirety – just like wireless, just like long distance service. And that's where I start from.

Now, we're working with states, to understand their concerns, and make sure we have a role. But I'm not going to abdicate that I think the FCC is first in line to set the initial regulatory environment, and that's the only way it could be. We have, if we want it, plenty of power to assert ourselves in that way, preemptive power, and classification power. And if you look, some of the courts who have started to look at it, have generally ruled that way: it's interstate in nature, it's more internet than not. So we'll see. But that's the way it's going to go.

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## PSTN phone to VoIP phone call flow

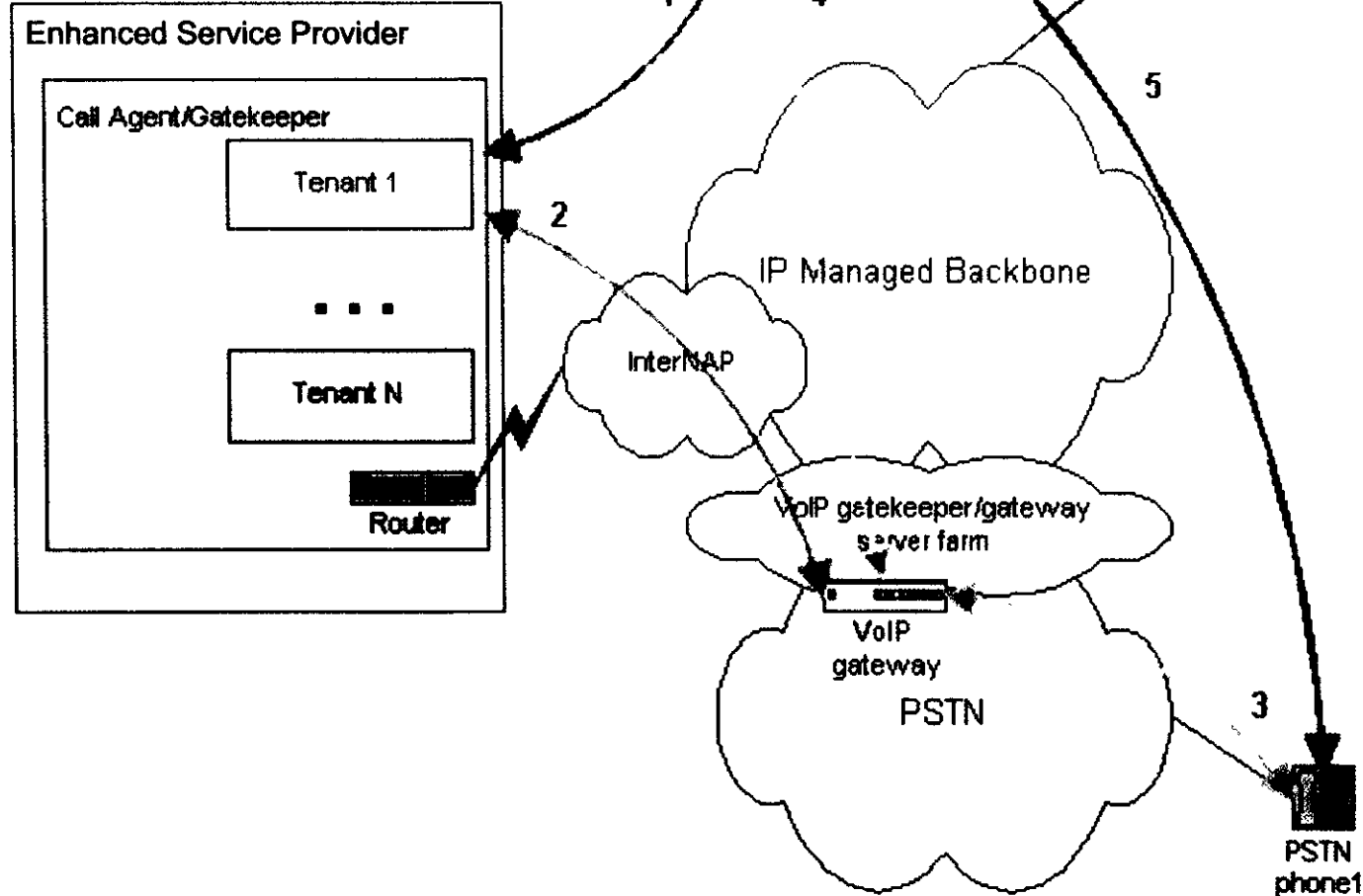
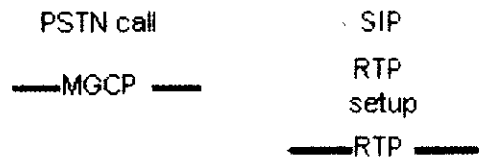


PSTN phone user calls VoIP phone

- 1 PSTN user call VoIP customer's phone number. Call is routed by PSTN to VoIP gateway
- 2 VoIP gateway sends request to enhanced service provider call agent
- 3 Call Agent sends ring tone to target VoIP phone (Client Adapter)
- 4 VoIP gateway and VoIP phone (Client Adapter) setup RTP stream parameters
- 5 After RTP stream setup voice call from VoIP phone (Client Adapter phone) to PSTN phone is established.



## VoIP phone to PSTN phone off-net call flow



VoIP phone user calls PSTN phone number

- 1 IP phone (Client Adapter) sends call request to Call Agent
- 2 Call Agent identifies target VoIP gateway and forwards call to VoIP gatekeeper/gateway server farm
- 3 VoIP gateway calls destination PSTN phone.
- 4 If the call is answered the VoIP gateway it establishes the RTP stream parameter's with the VoIP client adapter. If destination PSTN phone is busy VoIP gateway drops the call and sends busy signal to VoIP user's phone. If destination PSTN phone doesn't answer Call Agent waits for PSTN disconnect, and sends call disconnected to VoIP user's phone
- 5 After the RTP stream is setup the voice call from VoIP phone to PSTN phone is established.





**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of )  
 )  
LEVEL 3 COMMUNICATIONS LLC )  
 )  
Petition for Forbearance from Enforcement )  
of Section 251(g) and Rule 51.701(b)(1), )  
Pursuant to Section 10(c) of the )  
Communications Act of 1934 and Section )  
1.53 of the Commission's Rules )

**Declaration of Jeffrey Pelletier**

On this 22nd day of December, 2003, I, Jeffrey Pelletier, declare under penalty of perjury as follows:

**A. Qualifications**

1. Having worked in the field for 11 years, I possess detailed first-hand knowledge of Internet-based communications in general and IP communications that embed voice applications ("Voice-embedded IP") in particular.
2. I am presently employed as a Senior Architect in the Softswitch Architecture and Engineering department at Level 3 Communications, LLC ("Level 3"). The Softswitch Architecture and Engineering department is responsible for the engineering and design of the systems and equipment needed to support Level 3's Voice-embedded IP services. As a Senior Architect, it is my responsibility to ensure that the Voice-embedded IP architecture supports the range of services that Level 3 currently offers, and that it will offer in the future, in a reliable cost effective, and high quality manner.
3. Immediately prior to my current position at Level 3, I worked as a Senior Engineer at Masergy Communications. In that position I was responsible for Voice-over IP ("VoIP") engineering and systems. This included the testing and implementation of VoIP equipment and tools. In addition, I have worked as a VoIP architectural consultant to Net2Phone, a contributor to "The VoIP Implementation & Planning Guide" issued by the United States Telecom Association, and as a Senior Manager with WorldCom/MCI responsible for VoIP network and services architecture. I have also worked for Nortel Networks as an engineer responsible for long distance switching products for the PSTN.

4. I received a Bachelor of Science degree in Computer Sciences from the University of Texas at Austin in 1992.
5. I am currently a member of the Institute of Electrical and Electronics Engineers.

B. Purpose of Declaration

6. As I explain in greater detail below, Voice-embedded Internet Protocol ("IP") applications are beginning to flourish and will do so as long as there are not significant, onerous changes, such as the imposition of legacy access charges. If permitted to develop without onerous and unnecessary regulations such as legacy access charges, Voice-embedded IP will continue to allow enterprises and consumers to communicate with one another in a flexible, interoperable environment that fuses the transmission of voice and data, and will deliver previously unimagined capabilities.
7. On the other hand, if the Commission imposes unwarranted regulations on Voice-embedded IP communications, the development and deployment of innovative Voice-embedded IP services will be severely stunted, thereby reducing consumers' options and allowing other countries' high-tech sectors to profit in this area without full U.S. competition.

C. Background of Voice-Embedded IP Communications

8. The architecture supporting Voice-embedded IP was created precisely because the existing Public Switched Telephone Network ("PSTN") is rigid, relatively closed to innovation, and unable to handle significant data transmissions on top of voice. The wireline telecommunications industry has reached a plateau for new services. The cost to develop new services for the PSTN and the cost model to deliver them is prohibitive.
9. The Internet proved to be an ideal platform for optimal creation of services and applications because it allows for the fusion of voice and data, which, in turn, opens the door for the development of a wide array of enhanced services. Because call processing and service functionality are separated from providing and maintaining the physical network, application developers operate with flexibility and efficiency in an open and competitive environment.
10. Voice-embedded IP communications can take several forms, including PSTN-to-PSTN (where one PSTN caller connects with another PSTN caller using an IP network for some of the transmission), IP-to-IP (where one Voice-embedded IP user calls another, with no connection to the PSTN), and PSTN-to-IP (where a PSTN user and a Voice-embedded IP user connect, using both the IP network and the PSTN).

11. The existing PSTN, which has been in operation for nearly 100 years, provides users with dedicated, end-to-end circuit connections for the duration of each call. When a user places a call on the PSTN, circuits are reserved at the originating switch, any tandem switches along the route between the two ends of the call, and the terminating switch. Signaling between these PSTN switches supports basic call setup, call management, and call tear down. In recent years, PSTN voice services have been paralleled by the rise of separate networks that support data traffic. Maintaining distinct networks to convey voice and data imposes an additional burden on service providers and an additional cost on consumers. As a result, a single network that permits the convergence of voice and data signals is much more efficient and flexible.
12. A Voice-embedded IP communications system digitizes voice and data inputs and transmits them as a stream of packets over a digital data network, such as the Internet or IP-based private networks. Because of the redundancies and alternate connections that are a deliberate feature of the Internet's design, the individual IP packets are able to flow to the destination independently, each following the best path available, thereby maximizing their use of IP network resources at any given instant. This means that the packets from a single communication may reach their destination along a variety of different routes. On the destination end, the Voice-embedded IP system resolves any problems resulting from packets arriving out of sequence (or not arriving at all) and reassembles them into a useable format. The Voice-embedded IP technology also ensures the quality of arriving signals by compensating for echoes made audible due to the end-to-end delay, for jitter, and for dropped packets. This entire process occurs in real time and in full duplex (or triplex, etc.), allowing multiple parties to the communication to send and receive voice and data simultaneously.
13. In communications from a PSTN-based user to a Level 3 Voice-embedded IP user, the caller places a call on the PSTN by dialing the ten-digit number for the Level 3 customer. That call is carried over the caller's local exchange carrier ("LEC"), then handed off to Level 3 at a point of interconnection. From there, Level 3 carries the call over its common carrier transmission facilities to a media gateway. At that gateway, the communication undergoes a protocol conversion (*i.e.*, compression and conversion to packets), the ten-digit phone number is associated with a customer IP address, and a request is made of that customer for instructions for the disposition of the call; the communication is routed according to the instructions given to Level 3 by the customer to whom the call is directed. Regardless of the ten-digit phone number's apparent location, the Level 3 customer may route the communication to a terminating point within the same local calling area as the caller, or to a location in another part of the state, a different state, or different country. Such routing may change on a call-by-call basis, and it is not necessarily fixed. Customers may choose to ring multiple endpoints or applications at the same time.

14. Conversely, for computer-to-phone connections, a party on the IP network originates the communication. That party hands its traffic in IP format to an IP transmission provider, which may be a third party, a Level 3 affiliate or Level 3. The IP transmission provider directs the traffic to the Level 3 media gateway closest to wire center associated with the PSTN number at which the communication is to terminate. At the gateway, the IP-formatted communication undergoes a protocol conversion from IP to traditional circuit-switched technologies. Level 3 then carries the communication over its common carrier facilities to a point of interconnection with the LEC serving the called party.
15. Unlike wireline telephone numbers, which generally bear a relationship to the location of the wireline telephone, Voice-embedded IP numbers may be completely divorced from geography. Thus, while a Voice-embedded IP user has an assigned ten-digit number, there is no engineering reason why that number must be associated with the Voice-embedded IP user's actual location. In fact, under many applications (such as a telework system that connects remote locations to a company's IP PBX) it would severely disrupt the usefulness of a Voice-embedded IP system to try to create a unique map between telephone number and geographic locations.
16. The technical differences between IP-based communications and PSTN voice calls result in a handful of core functional distinctions between the two. For example:
  - a. The IP network provides open access to users and developers, and permits services to be installed on servers other than those managed by the network provider. As a consequence, consumers are able to choose from a limitless array of applications available from developers and entrepreneurs all over the world. This openness, of course, drives innovation and competition. On the PSTN network, by contrast, users are limited to the features offered by their network provider.
  - b. Generally, PSTN numbers refer to physical locations, effectively limiting users to that location for the receipt of calls. Voice-embedded IP, by contrast, has no geographic ties. A Voice-embedded IP user with a Chicago phone number, for example, can receive calls and data in Chicago or anywhere else in the world.
  - c. When one PSTN wireline customer calls another, a physical circuit between the customers is dedicated to that communication for the duration of the call. With Voice-embedded IP, communications do not travel via dedicated circuits. Rather, they are "packetized," and each packet follows the best route over the IP network to the destination. As a result, Voice-embedded IP calls are less likely to be subject to circuit overloads or disconnections.

- d. Voice-embedded IP's transmission mechanism – millions of packets of data following the best routes – is virtually immune from systemic breakdown. PSTN communications travel over a dedicated circuit; if that circuit is cut for any reason, the communication terminates. By contrast, in the event of a natural disaster, attack, circuit congestion, or any other event that might disrupt wireline service, Voice-embedded IP service would remain operable, as the packets would follow alternate routes to their destination.
17. The shift to Voice-embedded IP communications promises better efficiencies in the transport of voice and data, and, as a result, lower communications costs for end users. In order to meet customer expectations, Voice-embedded IP already matches almost all of the features of voice communications currently supported by the PSTN. Voice-embedded IP's real promise, however, lies not in replicating the features of the PSTN, but with the approaching wave of advanced services that will far surpass the capabilities of the PSTN.

#### D. Applications

18. Voice-embedded IP's technological differences from the PSTN, and the functional capabilities that the IP platform allows, create dramatic possibilities extending far beyond simple voice connections.
19. The services that are available today already represent a leap beyond the PSTN. Because Voice-embedded IP's fusion of data and voice on a single platform is relatively new, however, it is impossible to predict the full range of applications that may eventually emerge if the technology is permitted to flourish in a uniformly and reasonably regulated environment. While this is only the tip of the iceberg, brief descriptions of Voice-embedded IP applications follow:
  - a. **Innovative Tele-Working.** With Voice-embedded IP, employees are less tied to schedules and bricks-and-mortar offices.
    - For instance, a stay-at-home parent who works in technical support could use Voice-embedded IP to direct incoming calls to his home office between the hours of 8:00 a.m. and 3:00 p.m., while his children are at school. During that "on" period, he would use his broadband connection to receive tech support calls at home, with full access to customer and product data. Periodic workers, regardless of time of day or length of availability, could log on to the network and work flexible hours.
    - This flexibility will allow telecommunication intensive companies to use part-time employees spread out in areas across the country. For example, a call that originates in Denver for an airline may first go through a voice response unit owned by the

end-user. Based on staffing, call volume or other criteria that the customer selects, that communication may be sent across the country to large call center or to part time employees located in rural and urban areas.

- A physician might use the same capabilities to respond to patient emergency calls at home, with full access to patient records stored in her office, and have the ability to alert the system that she is not available for calls (they would be routed to a colleague), or direct that the “call” be forwarded to a cellphone or wireless PDA.

b. **Multimedia Conferencing.** With Voice-embedded IP, multiple users can communicate with one another via voice and video, while drawing on data sources (spreadsheets, financial statements, etc.) simultaneously. IP-PSTN voice communications would support a flexible conferencing platform, allowing some attendees to participate via traditional circuit-switched devices (such as a wireless PDA, thereby combining circuit-switched voice, such as GSM, with Internet access over Wi-Fi or GPRS), while others use voice and data capabilities embedded in an IP-capable desktop.

- Workgroups spread around the world can work collectively on specific data-oriented tasks. As one example, an engineering team with expertise spread around the world can collaborate via voice and share data and documents in real time to revise design specifications.
- A university board with trustees in different cities can meet efficiently and effectively via video-conference (again, some in person, some on the phone, others via computer). At the meeting, participants can collectively review charts, access databases, and compile reports, all in real time. Simultaneously, two or more of the participants can “instant message” each other or hold a separate and private voice conversation.
- A geographically dispersed family could meet to share family digital photos or videos of grandchildren performing in a school play, while exchanging comments as if they were together in person.

c. **High-Power Call Centers.** Voice-embedded IP communications allow entities providing customer service to provide more focused assistance to customers. For customers with broadband access to the Internet, companies can share data, instant messages, voice communications, and URLs in real time. For all customers, IP communications technology with

a voice application allows the operator to receive the customer's voice communication and relevant customer data simultaneously. The operator can access case histories, account and credit information, inventory data, shipping info, and much more instantly and automatically at the exact moment the customer makes contact (whether by circuit-switched or IP device).

- d. **Unified Messaging.** Voice-embedded IP allows a user to have a single message platform for all types of communications. Rather than receive e-mail on a computer, voicemail on the phone, faxes on fax machines, and pages on a pager, Voice-embedded IP can route them all to a single unified mailbox, and users can retrieve them all from a single point of contact, whether using an IP or a circuit-switched device. A voicemail can be converted into text using voice recognition software, and an e-mail can be converted into a voice message. Users can organize, store, and prioritize these messages in the manner that suits them best, just like many computer users file e-mail messages in various folders, or screen e-mail messages from some senders and give high priority to others. Users can tell the network how, when and where they want to be notified – such as ensuring that a call from a doctor or teacher is routed to home, work, cellphone or to computer desktop, depending on where a person is, the time of day, and the devices that are actually turned on.
- e. **Expanded Call Management and Screening.** Unlike the PSTN, which can handle no more than two incoming voice calls at one time, Voice-embedded IP can manage limitless incoming voice calls, video feeds, and e-mails. Moreover, Voice-embedded IP can handle these incoming communications in a variety of ways, depending on the user's preferences. The system can take a voice message, page the user, convert a voice message to text (or a text message to voice), route the communication to another end-point, or deliver the communication in another format. Moreover, Voice-embedded IP users can retrieve messages in one format (say, text) while actively using another (say, voice). Thus, while a PSTN user must wait until a call is completed to check on messages that came in while the call was underway, Voice-embedded IP allows users to convert those messages into text and get them immediately or to play them in audio format on top of the ongoing connection.
- f. **Availability Awareness.** On the PSTN, callers dial a number without knowing whether the party on the other end is available, whether the caller will have to leave a message, or whether the line will just ring and ring. Voice-embedded IP, by contrast, allows users to specify their availability. In other words, Voice-embedded IP customers can indicate that they are free for a voice conversation, for video-conferencing, for e-mail, for gaming, or that they are not available at all. Voice-embedded IP customers can also use this technology to wait until people are actually



available to receive calls before contacting them, or to alert all attendees when everyone is available for a virtual conference.

- g. **Location Scheduling.** Voice-embedded IP users can create a daily location schedule (and update it anytime from anywhere) indicating where communications should be forwarded. In other words, a user could direct communications (of any form) to be directed to a mobile device during her commute, to her office during the day, to her brother's house during the holidays, and to a unified messaging center when she is eating dinner. As explained below, the user's configuration preferences stay with her wherever she may be when she accesses the network.

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- h. Simplified Relocation. Voice-embedded IP makes moves and changes much less painful and less expensive. For instance, to allow an employee using a circuit-switched phone to move offices, a company must map extensions, re-program special call-handling features, and activate new phone sets, and the employee's phone configurations have to be re-modified or re-customized. Voice-embedded IP simplifies the process. Employees moving to an office in another country (or, for that matter, families moving to another state) take their customized features with them automatically because Voice-embedded IP configuration data is tied to the user rather than a physical extension.

I declare under penalty of perjury that the foregoing is true and correct.



Jeffrey Pelletier  
Senior Architect  
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1025 Eldorado Blvd  
Broomfield, CO 80020

Executed on December 22 , 2003



# Summary of Selected ILEC Terminating Access Rate Elements

State	Indexed	Jur	Local			Tandem	
			CCL Term	Switching Term	TIC Term	Term	Term
KS	SWB	Inter	\$0.000000	\$0.002654	\$0.000000	\$0.000063	\$0.002717
KS		Intra	\$0.000000	\$0.002654	\$0.000000	\$0.000063	\$0.002717
MO	SWB	Inter	\$0.000000	\$0.002654	\$0.000000	\$0.000063	\$0.002717
MO		Intra	\$0.017992	\$0.008414	\$0.000000	\$0.000000	\$0.026406
OK	SWB	Inter	\$0.000000	\$0.002654	\$0.000000	\$0.000063	\$0.002717
OK		Intra	\$0.000000	\$0.005171	\$0.000000	\$0.000296	\$0.005467
AR	SWB	Inter	\$0.000000	\$0.002654	\$0.000000	\$0.000063	\$0.002717
AR		Intra	\$0.013404	\$0.007709	\$0.006411	\$0.000276	\$0.027800
TX	SWB	Inter	\$0.000000	\$0.002654	\$0.000000	\$0.000063	\$0.002717
UT	Qwest	Inter	\$0.000000	\$0.001968	\$0.000000	\$0.000180	\$0.002148
UT		Intra	\$0.006507	\$0.010400	\$0.000000	\$0.000191	\$0.017098
NE	Qwest	Inter	\$0.000000	\$0.001968	\$0.000000	\$0.000180	\$0.002148
NE		Intra	\$0.000000	\$0.001968	\$0.000000	\$0.000180	\$0.002148
OR	Qwest	Inter	\$0.000000	\$0.001968	\$0.000000	\$0.000180	\$0.002148
OR		Intra	\$0.000000	\$0.004380	\$0.000000	\$0.000410	\$0.004790
AZ	Qwest	Inter	\$0.000000	\$0.001968	\$0.000000	\$0.000180	\$0.002148
SD	Qwest	Inter	\$0.000000	\$0.001968	\$0.000000	\$0.000180	\$0.002148
NM	Qwest	Inter	\$0.000000	\$0.001968	\$0.000000	\$0.000180	\$0.002148
NM		Intra	\$0.012259	\$0.015822	\$0.000000	\$0.000190	\$0.028271
CO	Qwest	Inter	\$0.000000	\$0.001968	\$0.000000	\$0.000180	\$0.002148
WA	Qwest	Inter	\$0.000000	\$0.001968	\$0.000000	\$0.000180	\$0.002148
WA		Intra	\$0.001520	\$0.017069	\$0.000000	\$0.000199	\$0.018788
ID	Qwest	Inter	\$0.000000	\$0.001968	\$0.000000	\$0.000180	\$0.002148
ND	Qwest	Inter	\$0.000000	\$0.001968	\$0.000000	\$0.000180	\$0.002148
ND		Intra	\$0.018941	\$0.010566	\$0.000000	\$0.000447	\$0.029954

MT	Qwest	Inter	\$0.000000	\$0.001968	\$0.000000	\$0.000180	\$0.002148
MT		Intra	\$0.014375	\$0.015416	\$0.000000	\$0.000443	\$0.030234
WY	Qwest	Inter	\$0.000000	\$0.001968	\$0.000000	\$0.000180	\$0.002148
WY		Intra	\$0 000000	\$0.005664	\$0.000000	\$0.000199	\$0.005863
MN	Qwest	Inter	\$0.000000	\$0.001968	\$0 000000	\$0.000180	\$0.002148
MN		Intra	\$0.012361	\$0.008063	\$0.000000	\$0.000431	\$0.020855
IA	Qwest	Inter	\$0.000000	\$0 001968	\$0.000000	\$0.000180	\$0.002148
IA		Intra	\$0.001258	\$0.010000	\$0.000000	\$0.000285	\$0.011543
LA	BellSouth	Inter	\$0 000000	\$0.002158	\$0.000000	\$0.000176	\$0.002334
LA		Intra	\$0.000000	\$0.006370	\$0.000000	\$0.000360	\$0.006730
NC	BellSouth	Inter	\$0.000000	\$0.002158	\$0.000000	\$0 000176	\$0.002334
NC		Intra	\$0.000100	\$0.002328	\$0.000000	\$0.000360	\$0.002788
KY	BellSouth	Inter	\$0.000000	\$0.002158	\$0.000000	\$0.000176	\$0.002334
KY		Intra	\$0.000000	\$0.002158	\$0.000000	\$0.000176	\$0 002334
FL	BellSouth	Inter	\$0.000000	\$0.002158	\$0.000000	\$0.000176	\$0.002334
FL		Intra	\$0.015847	\$0.008661	\$0.000000	\$0.000360	\$0.024868
TN	BellSouth	Inter	\$0.000000	\$0.002158	\$0.000000	\$0.000176	\$0.002334
TN		Intra	\$0.000940	\$0.002128	\$0.000000	\$0.000176	\$0.003244
MS	BellSouth	Inter	\$0.000000	\$0.002158	\$0.000000	\$0.000176	\$0.002334
MS		Intra	\$0.000000	\$0.002748	\$0.000000	\$0.000176	\$0.002924
AL	BellSouth	Inter	\$0.000000	\$0 002158	\$0.000000	\$0.000176	\$0.002334
AL		Intra	\$0.000000	\$0.005023	\$0.000000	\$0.000360	\$0.005383
SC	BellSouth	Inter	\$0.000000	\$0.002158	\$0.000000	\$0.000176	\$0.002334
SC		Intra	\$0.000000	\$0 006979	\$0.000000	\$0.000000	\$0.007389
GA	BellSouth	Inter	\$0.000000	\$0.002158	\$0.000000	\$0.000176	\$0.002334
GA		Intra	\$0.000000	\$0.002136	\$0.000000	\$0.000176	\$0.002312
NY	Bell Atlantic - North (Verizon)	Inter	\$0.000000	\$0.002080	\$0.000000	\$0.000000	\$0.002080
NY		Intra	\$0.003918	\$0.003000	\$0.000000	\$0.000000	\$0.006918
VT	Bell Atlantic - North (Verizon)	Inter	\$0.000000	\$0.002080	\$0.000000	\$0.000000	\$0.002080
VT		Intra	\$0.000000	\$0.015138	\$0.000000	\$0.000731	\$0.015869
RI	Bell Atlantic - North (Verizon)	Inter	\$0.000000	\$0.002080	\$0.000000	\$0.000000	\$0.002080
RI		Intra	\$0.000000	\$0.008400	\$0.000000	\$0.005202	\$0.013602
NH	Bell Atlantic - North (Verizon)	Inter	\$0.000000	\$0.002080	\$0.000000	\$0.000000	\$0.002080
NH		Intra	\$0.026494	\$0.001934	\$0.000000	\$0.000716	\$0.029144

MA	Bell Atlantic - North	Inter	\$0.000000	\$0.002080	\$0.000000	\$0.000000	\$0.002080
MA	(Verizon)	Intra	\$0.002080	\$0.003080	\$0.000000	\$0.003080	\$0.003080
PA	Bell Atlantic - South	Inter	\$0.000000	\$0.002431	\$0.000000	\$0.000000	\$0.002431
PA		Intra	\$0.006110	\$0.009000	\$0.000000	\$0.000195	\$0.015305
NJ	Bell Atlantic - South	Inter	\$0.000000	\$0.002431	\$0.000000	\$0.000000	\$0.002431
NJ		Intra	\$0.002533	\$0.008934	\$0.000000	\$0.000150	\$0.011617
DC	Bell Atlantic - South	Inter	\$0.000000	\$0.002431	\$0.000000	\$0.000000	\$0.002431
DC		Intra/ NA					\$0.000000
MD	Bell Atlantic - South	Inter	\$0.000000	\$0.002431	\$0.000000	\$0.000000	\$0.002431
MD		Intra	\$0.000000	\$0.003000	\$0.003109	\$0.000222	\$0.006331
WV	Bell Atlantic - South	Inter	\$0.000000	\$0.002431	\$0.000000	\$0.000000	\$0.002431
WV		Intra	\$0.000000	\$0.002527	\$0.000000	\$0.000000	\$0.018235
VA	Bell Atlantic - South	Inter	\$0.000000	\$0.002431	\$0.000000	\$0.000000	\$0.002431
VA		Intra	\$0.000000	\$0.010000	\$0.000000	\$0.000150	\$0.010150
CT	SNET	Inter	\$0.000000	\$0.003133	\$0.000000	\$0.000056	\$0.003189
CT		Intra	\$0.000000	\$0.007240	\$0.000000	\$0.000085	\$0.007325
IN	Ameritech	Inter	\$0.000000	\$0.003134	\$0.000000	\$0.000144	\$0.003278
IN	(SBC)	Intra	\$0.000000	\$0.003134	\$0.000000	\$0.000144	\$0.003278
OH	CBT	Inter	\$0.000000	\$0.003671	\$0.000000	\$0.000600	\$0.004271
OH		Intra	\$0.000162	\$0.005330	\$0.000000	\$0.000600	\$0.006092
IL	Ameritech	Inter	\$0.000000	\$0.003134	\$0.000000	\$0.000144	\$0.003278
IL		Intra	\$0.000000	\$0.003818	\$0.000000	\$0.000163	\$0.003981
MI	Ameritech	Inter	\$0.000000	\$0.003134	\$0.000000	\$0.000144	\$0.003278
MI		Intra	\$0.000000	\$0.003134	\$0.000000	\$0.000144	\$0.003278
WI	Ameritech	Inter	\$0.000000	\$0.003134	\$0.000000	\$0.000144	\$0.003278
WI		Intra	\$0.000000	\$0.003134	\$0.000000	\$0.000144	\$0.003278
NV	SBC-Nevada	Inter	\$0.000000	\$0.002412	\$0.000000	\$0.000208	\$0.002620
NV		Intra	\$0.000000	\$0.002412	\$0.000000	\$0.000208	\$0.002620
CA	PacBell	Inter	\$0.000000	\$0.002745	\$0.000000	\$0.000071	\$0.002816
CA		Intra	\$0.000000	\$0.008663	\$0.004488	\$0.000270	\$0.013421
CA		Per Call		\$0.001901			
DE	VZ	Inter	\$0.000000	\$0.002080	\$0.000000	\$0.000000	
DE							

Source: Compiled by Level 3 Communications from ILEC-filed state tariffs (Sept. 1, 2003).





**MASTER INTERCONNECTION, COLLOCATION AND RESALE AGREEMENT  
FOR THE STATE OF [INSERT STATE NAME]**

*Insert Date of Agreement  
(leave blank until ready for final signature)*

*[Insert CLEC Name]*

*and*

*[Insert Sprint Company Name]*

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